

## CLAIMS:

1. A resonant power LED control which comprises a single resonant converter for the simultaneous, independent brightness and color control of two LEDs (41, 42) or two groups of LEDs, which converter is formed substantially from a half or full bridge DC/AC converter (2) with a control unit (21), a resonant capacitor, and a transformer (3).

5

2. A resonant power LED control as claimed in claim 1, characterized in that the light emitted by the diodes (41, 42) forms an input value for the control unit (21).

3. A resonant power LED control as claimed in claim 2, characterized in that the  
10 input signal representing the input value is achieved by means of an optical coupling, via  
which coupling the measured output currents of the light emitted by the diodes (41, 42) are  
fed back to the DC/AC converter (2).

4. A resonant power LED control as claimed in any one of the preceding claims,  
15 characterized in that several LEDs are joined together into groups of arrays connected in  
series each time.

5. A resonant power LED control as claimed in any one of the preceding claims,  
characterized in that the voltage supply of the LEDs (41, 42) takes place via the secondary  
20 side of the transformer (3).

6. A resonant power LED control as claimed in any one of the claims 1 to 5,  
characterized in that the transformer (3) has a secondary winding to which the LEDs (41, 42)  
are connected in antiparallel.

25

7. A resonant power LED control as claimed in any one of the claims 1 to 5,  
characterized in that the transformer (3) has two secondary windings to which the LEDs (41,  
42) are connected such that they are supplied with current in succession.

8. A resonant power LED control as claimed in claim 7, characterized in that the transformer (3) has a central tap (33) at the secondary side, to which tap the common anode or cathode of the LEDs (41, 42) is connected.

5 9. A resonant power LED control as claimed in claim 8, characterized in that a further LED (43) is connected as a main light source between the central tap (33) and the common cathode or anode of the LEDs (41, 42) that serve as subsidiary light sources.

10. 10. A resonant power LED control as claimed in claim 9, characterized in that a switching diode is used instead of one of the subsidiary light source LEDs (41, 42).

11. 11. A resonant power LED control as claimed in any one of the claims 6 to 8, characterized in that the color of the LEDs (41) is white and of the LEDs (42) amber/orange.

15 12. 12. A resonant power LED control as claimed in claim 9, characterized in that the color of the subsidiary light source LEDs (41) is green, of the subsidiary light source LEDs (42) blue/cyan, and of the main light source LEDs (43) red.

20 13. 13. A resonant power LED control as claimed in claim 10, characterized in that the color of the subsidiary light source LEDs (41, 42) is cyan/blue and of the main light source LEDs (43) amber/orange.

14. 14. A resonant power LED control as claimed in any one of the preceding claims, characterized in that the LEDs (41, 42) are connected to filter capacitors (61, 62).